



ASX/Media Release

23 April 2010

## AVALON MINERALS LTD MARCH 2010 QUARTERLY REPORT

### HIGHLIGHTS

#### Viscaria VMS Copper Project – Sweden (Avalon – 100%)

- Preliminary results from 4,500 metre diamond drilling program at 'D' Zone received including best result to date of 27 metres @ 2.2% Cu
- Significant zone of Magnetite Iron Ore intersected in 'D' Zone including results of 43 metres @ 36.3% Fe
- Results confirm the potential to increase the current JORC resource inventory at 'D' Zone and new magnetite iron ore potential
- Three drill rigs currently on site and drilling at Viscaria 'D' Zone
- Drilling will continue throughout the June Quarter at 'A' and 'B' Zone open pit copper resources
- Mining Exploitation Concession for open cut mining at Viscaria lodged with Bergsstaten Mining Inspectorate of Sweden.

#### Corporate

- Successful completion of A\$3.5m Rights Issue
- Appointment of General Manager Operations to fast-track Viscaria development

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**ASX Code:** AVI  
132.3 million shares  
1.9 million unlisted options

#### Directors

David McSweeney (Executive Chairman)  
Tan Sri Abu Sahid Mohamed (Non-Executive Director)  
Stephen Stone (Non-Executive Director)  
Gary Steinepreis (Non-Executive Director)

#### Inferred Mineral Resources:

'A' Zone South: 8.2mt @ 2.7%Cu  
'A' Zone North: 5.6mt @ 1.3% Cu  
'B' Zone: 24.3mt @ 0.8% Cu  
'D' Zone: 2.5mt @ 1.6% Cu

**For a total of 40.6mt @ 1.3% Cu and  
520,000 tonnes of copper metal**

## VISCARIA COPPER PROJECT

The Viscaria Copper Project in northern Sweden is the Company's primary focus and forms the basis for Avalon's plans to become a mid-tier copper producer. The Viscaria copper deposits are regarded as being of Volcanogenic Massive Sulphide (VMS) origin.

### 'D' Zone Drilling

The 'D' Zone consists of a 2.5 million tonne at 1.6% Cu Inferred Resource based on 32 historical Reverse Circulation (RC) and Diamond Drill (DD) holes.

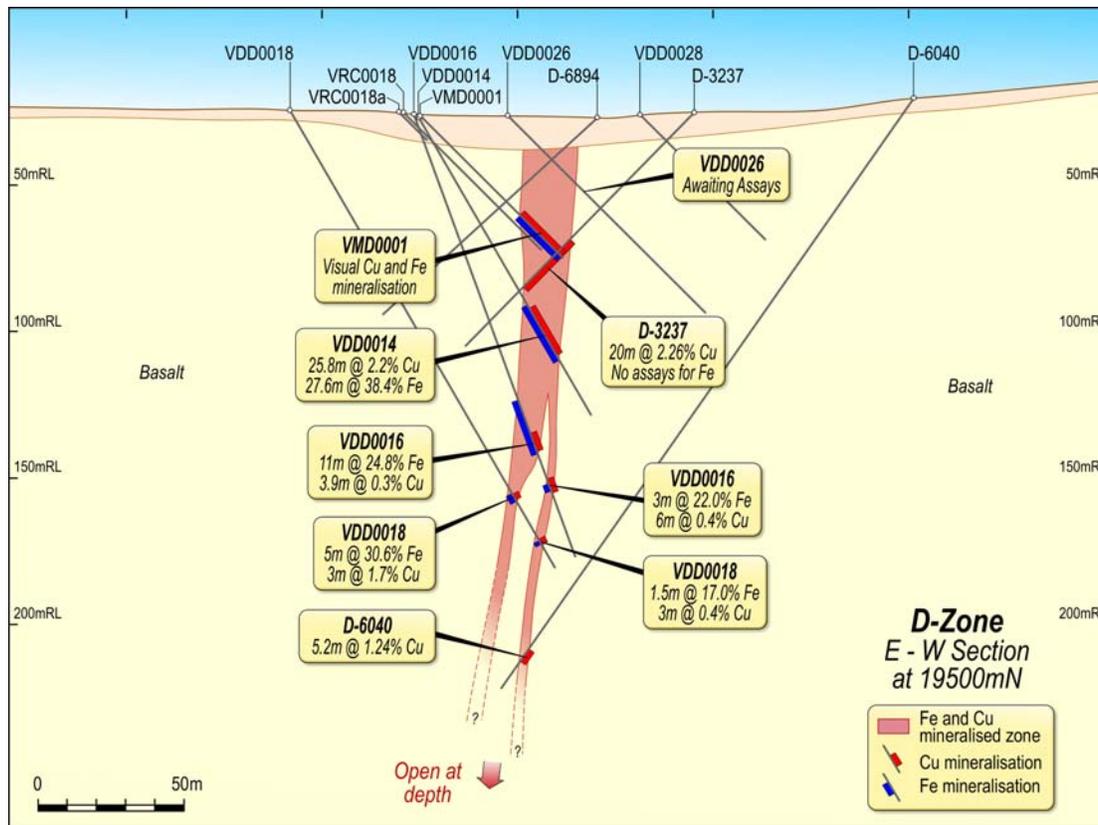
The 2010 program of 4,500 metres of DD is designed to infill the initial scout drilling, with generally 100 metre spaced drill lines, and confirm the continuity and tenor of the copper mineralisation.

At the end of the Quarter, 30 holes for 2,257 metres had been completed. Assays for 11 drill holes had been returned and a detailed list of all significant assay intersections is outlined in Table 1.

Significant intersections encountered to date in the 'D' Zone include:

- **6.8m @ 1.58% Cu from 66m and 42.9m @ 36.3% Fe from 93m in VDD0013**
- **27.6m @ 2.24% Cu and 38.4% Fe from 68m in VDD0014**
- **2.9m @ 1.74% Cu from 151m in VDD0018**

In addition to the copper mineralisation, significant intersections of massive to disseminated magnetite iron ore have been encountered adjacent to the copper-rich horizons.



**Figure 1: 19500mN Section**

The magnetite-rich horizon generally sits to the west of the copper mineralisation with some overlap present between the two tabular sheets of mineralisation. (Refer figure 1 and 3.)

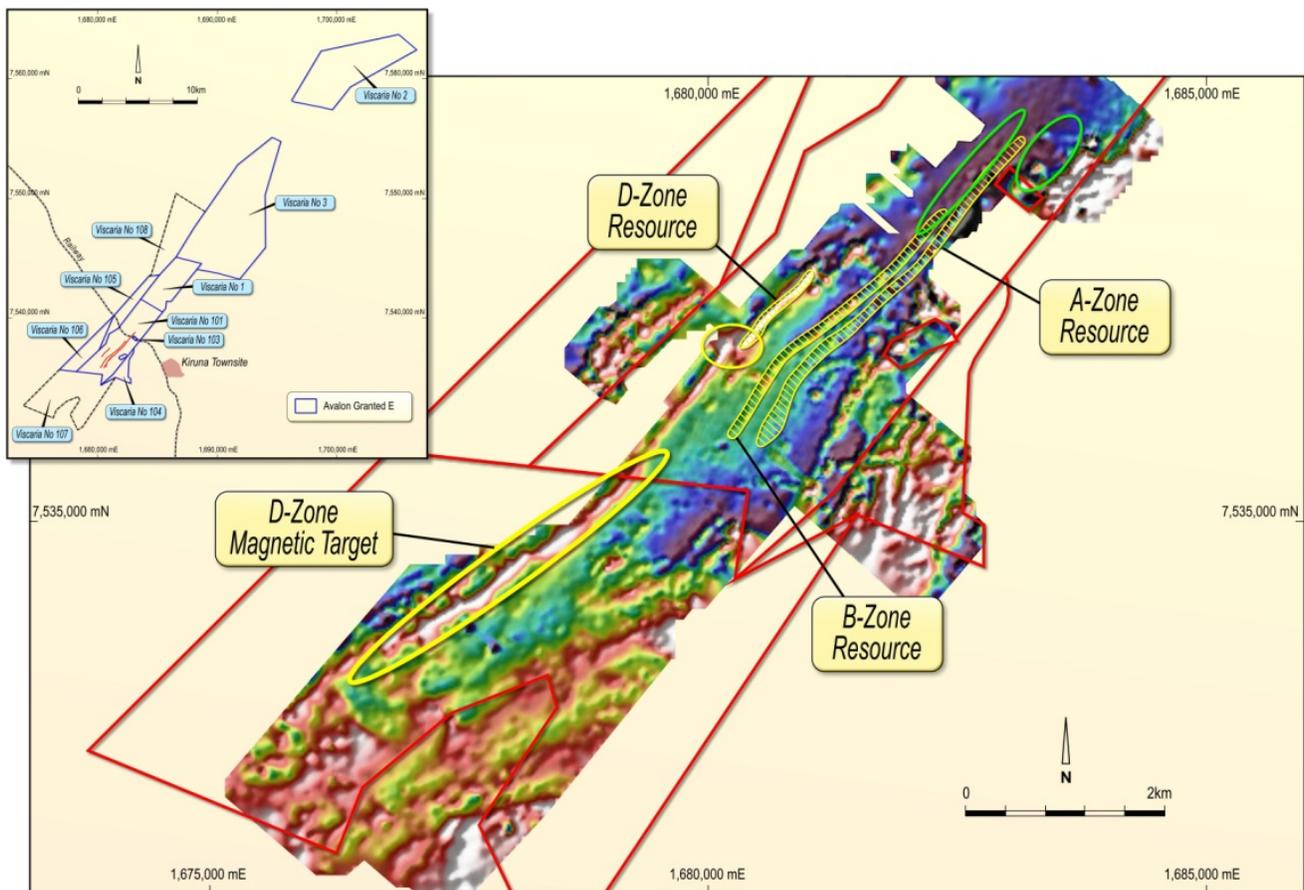
This Skarn type of iron ore appears to be rich in favourable elements such as calcium and magnesium carbonates and depleted in detrimental elements such as Silica, Alumina and Phosphorus.

The lack of impurities, together with the coarse grained nature of the magnetite, provides encouragement that the iron ore will be commercially significant to Avalon – this is essentially a very promising iron ore deposit that lies adjacent to the previously intersected copper mineralisation.

A metallurgical test work program will commence immediately to assess the quality of concentrate for both copper and iron ore that may be expected from this type of deposit. Ground and airborne magnetic surveys indicate the magnetite-rich horizon to be laterally extensive and traceable for up to 5km south of the ‘D’ Zone drilling location. (Refer to Figure 2.)

Being within 5km of one of Europe’s premium iron ore and pellet making operations at Kiruna places Avalon in an excellent position to be able to maximise the commercial value of any high-quality magnetite ores discovered at Viscaria.

As a result of the recognition of the magnetite potential of the ‘D’ Zone, the Company has commenced a review of other iron ore opportunities within its Viscaria ground holdings.

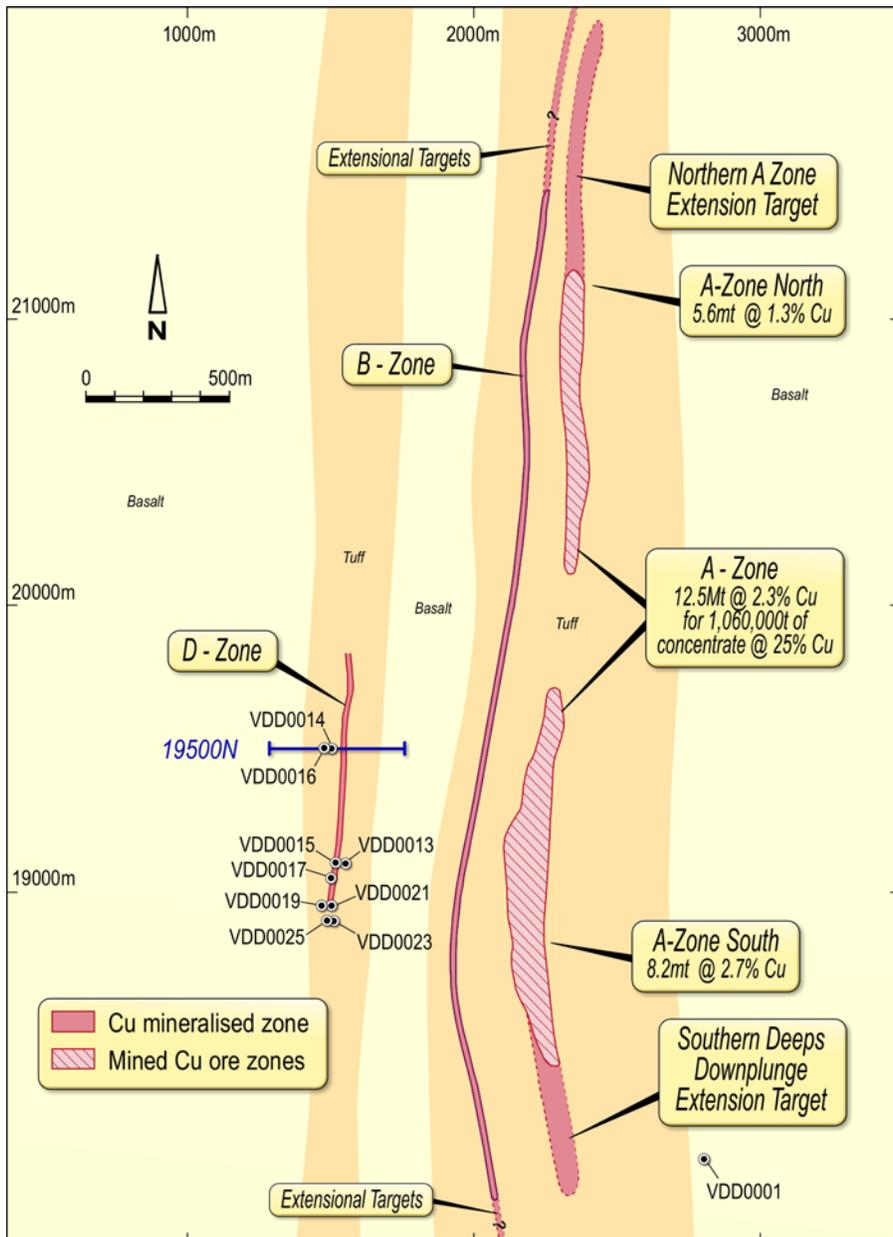


**Figure 2: Magnetic image showing magnetite rich unit extending 5 kilometres south of the ‘D’ Zone**

## 'A' Zone Drilling

'A' Zone drilling was completed in late December 2009. Significant assay results not previously reported in the March Quarter include:

- **9m @ 0.42% Cu and 1.21g/t Ag** from 205m in hole VDD0001;
- **2m @ 0.49% Cu and 0.8g/t Ag** from 286m in hole VDD0001;
- **4m @ 0.37% Cu and 1.1g/t Ag** from 840m in hole VDD0001; and
- **2m @ 0.42% Cu and 1.55g/t Ag** from 898m in hole VDD0001 (Refer figure 3 for drillhole locations).



**Figure 3: Viscaria 'D' and 'A' Zone Drill Hole Locations**



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### **Planned 'A' Zone Drilling**

Further drilling (both RC and DD) is planned for the 'A' Zone following completion of the 'D' Zone work currently being undertaken.

This further drilling will take the form of a series of relatively shallow drill holes targeting the open pit minable portion of the 'A' Zone. This work is necessary to confirm the up-dip continuity of high-grade copper resources previously defined from underground drilling in preparation for pit optimisation and final design.

This phase of drilling has the aim of providing robust resource envelopes for input into the Definitive Feasibility Study (DFS) of Viscaria by upgrading the current Inferred 'A' Zone resource into the Measured and Indicated categories.

### **Planned 'B' Zone Drilling**

The 'B' Zone lies approximately 200 metres to the west of the 'A' Zone and contains an Inferred Resource of 24mt at 0.8% Cu based on 151 RC and DD (mostly underground) drill holes.

Drilling is planned to confirm the position and tenor of the copper mineralisation in the near surface, open pit minable portion of the copper mineralisation and will be undertaken following completion of 'A' Zone drilling.

### ***Other Exploration Targets at Viscaria***

In addition to the targets set out above, Avalon has identified a number of other exploration targets at Viscaria.

Avalon controls over 200km<sup>2</sup> of tenements at Viscaria and has identified a number of highly prospective EM conductor highs in this land package that warrant further exploration following the priority exploration targets currently being evaluated.

A number of these regional targets were inspected by the Company's geologists during visits undertaken during the Quarter and further validation of historical SGU (Swedish Geological Survey) data in preparation for the northern summer field season was undertaken.

### ***Mining Exploitation Concession***

The application for granting of the Mining Exploitation Concession (MEC) covering the proposed mining operations at Viscaria has been lodged with the Bergsstaten, (equivalent of the Department of Mineral and Petroleum Resources of Western Australia) in early April.

The granting of a mining concession in Sweden is similar to the grant of a mining lease in Western Australia in that it does not in itself give any authority to commence mining.

Following the lodgement of the MEC application, submissions by affected parties to the MEC, including land holders, city administrators in Kiruna, other mining companies and the Saami (local reindeer herders), are considered by the Bergsstaten prior to the granting of the mining tenure.

Avalon's advice is that the MEC application process will take 2-4 months to complete from submission date to final granting of the Concession.

A further detailed Environmental Impact Assessment (EIA) study and extensive community consultation will be undertaken following the grant of the MEC.



Avalon notes that the Kiruna district is an active mining area and that the history of the Kirunavarra and Viscaria Operations suggests that the Kiruna community is supportive of new mining operations in the region.

In the best case scenario, Avalon would be in a position to obtain the necessary mining approvals by the second half of 2011. The decision and timing with regard to any approval for the commencement of any new mining operations at Viscaria will be determined by The Environmental Court of Sweden after consideration is given to Avalon's EIA and after considering all submissions from affected parties.

Avalon is looking forward to working with the community at Kiruna, the Bergsstaten, the Saami and the Environmental agencies as it progresses its plans for the development of mining operations at Viscaria.

The benefits flowing into the region as a result of Avalon's development of mining activities are expected to be significant and will provide local communities with employment opportunities and substantial economic rewards.

## **Adak Copper Project**

The Adak copper project contains five historical mines – **Adak, Lindskold, Brannmyran, Karlsson (the Adak Dome Mines) and Rudtjebacken** – covering an area of 26.71km<sup>2</sup>, located in the world-class Skelleftea VMS mining district of Northern Sweden.

The Adak project was operated by the Government of Sweden between 1940 and 1977 when the last mine was closed by Swedish mining giant Boliden. The total material mined from the Adak Project was approximately 10.8Mt at 1.56% Cu including 6.3Mt at 2.02% Cu from the Adak Dome and 4.74Mt at 0.92% Cu and 2.96% Zn at Rudtjebacken.

Avalon continued with the collection and digitizing of all the historical data (exploration, drilling, mining, metallurgy) during the Quarter in preparation for commencing field based exploration programs in 2011.

## **CORPORATE**

### **Rights Issue**

During the Quarter Avalon Minerals Ltd successfully completed a A\$3.5m Rights Issue which comprised a 1-for-7 entitlement for existing shareholders at a price of 21 cents per share.

Take-up of the rights included 8.73 million shares raising A\$1.7 million and the distribution of the shortfall (8.44 million shares) was also completed to a number of institutional clients at A\$0.21/share to raise a further A\$1.8 million.

### **Appointment of General Manager Operations**

In February, Avalon appointment senior mining executive Andrew Munckton to the newly created position of General Manager – Operations.

Mr Munckton was most recently General Manager of Operations with the successful Australian iron ore company Gindalbie Metals Limited from 2004 to 2009, and will lead Avalon's team as it progresses Viscaria through the exploration and feasibility stage towards development.



**Competent Persons Statement**

*The information in this report relating to the Mineral Resource and Exploration Results is reviewed by Mr Andrew Munckton BSc (Mining Geology) who is a Member of the Australasian Institute of Mining and Metallurgy and is employed by Avalon Minerals Ltd as the Company's General Manager of Operations. Mr Munckton has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Persons as defined in the 2004 Edition of the "Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves".*

**- ENDS -**

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**On behalf of:**  
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**Table 1: Significant Drilling Intercepts - Viscaria**

Hole_ID	Project	Prospect	From	To	Interval	Cu %	Fe %	Ag ppm	
VDD0001	Viscaria	A Zone Depth Extension	205	213	9	0.42	NSR	1.21	
				286	288	2	0.49	NSR	0.8
				629	630	1	0.56	NSR	1.9
				715	716	1	0.62	NSR	1.7
				840	844	4	0.37	NSR	1.1
				898	900	2	0.42	NSR	1.55
VDD0013	Viscaria	D-zone	66.2	73	6.8	1.58	29.59	0.73	
<i>including</i>				67.2	68.15	0.95	3.89	40.6	2.2
				82.27	85.12	2.85	1.13	18.05	0.81
				93.5	136.4	42.9	0.30	36.33	2.26
<i>including</i>				94.2	99.15	4.95	1.82	43.48	3
<i>including</i>				103	105	2	0.58	36.55	1.3
				138	140	2	0.76	11.08	NSR
				141	152.35	11.35	0.05	41.67	1.34
				156	157	1	0.88	8.63	NSR
				157	161	4	0.27	40.83	NSR
				165	166	1	0.30	39.7	NSR
VDD0014	Viscaria	D-zone	68.5	96.13	27.63	2.24	38.4	0.34	
<i>including</i>				76.2	85	8.8	3.82	40.11	0.53
				101.25	101.9	0.65	0.84	7.45	7.8
VDD0015	Viscaria	D-zone	12.7	13.7	1	0.14	24.1	NSR	
				13.7	14.2	0.5	0.49	11.3	NSR
				16.6	35.95	19.35	0.40	33.41	0.16
VDD0016	Viscaria	D-zone	111	112.75	1.75	0.07	40.47	NSR	
				119.15	120.71	1.56	0.3	40.85	0.23
VDD0017	Viscaria	D-zone	11.3	16.78	5.48	0.94	30.72	0.56	
<i>including</i>				11.3	14.9	3.6	1.40	38.06	0.85
				17.9	19.25	1.35	0.38	6.79	NSR
VDD0019	Viscaria	D-zone	12.7	13.7	1	0.14	24.1	NSR	
				13.7	14.2	0.5	0.49	11.3	NSR
				16.6	35.95	19.35	0.40	33.41	0.16
<i>including</i>				26.9	35.95	9.05	0.74	34.71	0.34
VDD0021	Viscaria	D-zone	3.85	11.8	7.95	0.75	39.22	0.75	
<i>including</i>				5.2	11.8	6.6	0.87	39.05	0.74
				16	17	1	0.42	4.34	NSR
VDD0023	Viscaria	D-zone	14.6	43	28.4	0.20	36.85	1.24	
<i>including</i>				14.6	19.2	4.6	0.71	49.99	4.67
				50.2	51.1	0.9	0.22	43.52	NSR
				51.6	60.7	9.1	0.40	19.18	0.35
VDD0025	Viscaria	D-zone	18.5	36	17.5	NSR	29.95	NSR	
<i>including</i>				21	28.2	7.2	NSR	40.66	NSR
				41.8	52	10.2	NSR	21.12	NSR
VDD0027	Viscaria	D-zone	NSR						
VDD0029	Viscaria	D-zone	23.5	24.5	1	0.44	8.08	NSR	
				40.05	41.35	1.3	0.21	25.03	0.92
<i>including</i>				40.05	40.25	0.2	0.57	49.2	2.5



## **Avalon Minerals – Background**

Avalon Minerals Ltd listed in March 2007 with the aim of discovering and developing mineral deposits and to subsequently build a diversified resource mining group based on cash flows from producing operations.

The primary project generation strategy has been very successful with the acquisition of the advanced Viscaria copper deposit in northern Sweden where a maiden JORC Code Compliant Inferred copper resource has been defined.

This Inferred resource is comprised of:

8.2 million tonnes @ 2.7% Cu at the 'A' Zone South;  
5.6 million tonnes @ 1.3% Cu at the 'A' Zone North;  
24.3 million tonnes @ 0.8% Cu at the 'B' Zone; and  
2.5 million tonnes @ 1.6% Cu at the 'D' Zone.

These resources combined total 520,000 tonnes of contained copper.

In addition, the cluster of five historical copper-zinc mines at Adak, 300km south of Viscaria, also provides an opportunity for Avalon to incrementally grow its base metal inventory within northern Sweden.

## **Overview of Mining in Sweden**

Sweden has a rich mining history which has been of great economic importance to the country. Mining and metal production are still important Swedish industries, and Sweden is one of the leading ore and metal-producing countries in the European Union.

The many benefits of operating in Sweden include; well developed infrastructure, a highly skilled mining and exploration workforce, extremely low sovereign risk and a very strong mining culture built up over many decades.

## **Overview of Viscaria**

Global mining company, Outokumpu, closed the Viscaria mine in 1997 after approximately 12.54 million tonnes of ore at 2.29% copper had been produced, mainly from the 'A' Zone over a period of 15 years.

The Viscaria copper concentrate specifications averaged:

- Cu 25%
- Fe 20%
- Zn 3.3%
- Ag 40g/t
- Au 0.5g/t

At the time of its closure, the spot copper price was approximately US\$1.00/lb compared to a price of approximately US\$3.40/lb today and importantly, only minimal exploration has been conducted at Viscaria since the mine closed.

The Viscaria Copper mine is located in the Norrbotten area of Northern Sweden, four kilometres from the Kiruna Iron Ore mine, Sweden's largest iron ore mine and the world's second largest underground mine.

Viscaria is 80 kilometres north of Europe's largest open cut mine, the Aitik copper mine (18mt/annum at 0.3% Cu) which is owned by Boliden and currently being expanded to 35mt/annum at 0.3% Cu.

The Viscaria Project is located adjacent to road, rail and hydro power infrastructure and is only a short distance from the regional mining centre of Kiruna, (population 20,000).